

WHAT IS CLAIMED IS:

1. A method for providing an audio stream in a voice over Internet Protocol (VoIP) environment, comprising:

5 determining a quality value for each of a plurality of audio streams communicated in a VoIP format; and

selecting one of the audio streams for playing to a call on hold based on the quality values for the audio streams.

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2. The method of Claim 1, wherein the audio stream comprises a music-on-hold channel from a music-on-hold server.

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3. The method of Claim 1, wherein the quality value for an audio stream comprises at least one of packet jitter and packet loss for the audio stream.

4. The method of Claim 1, further comprising
20 selecting the audio stream comprising a highest quality value.

5. The method of Claim 1, wherein the quality value for an audio stream comprises a current value for
25 the audio stream determined based on real-time performance of the audio stream at a point at least proximate to a device playing the selected audio stream to the call on hold.

30 6. The method of Claim 1, wherein the audio stream selected for playing to the call on hold comprises a

first audio stream, further comprising, in response to at least degradation of the first audio stream below a threshold, selecting for playing to the call on hold a second audio stream based on a then current quality value
5 for each of the remaining the audio streams.

7. The method of Claim 1, further comprising determining the quality value for each audio stream based on a sliding window of quality metrics for the audio
10 stream.

8. The method of Claim 6, further comprising switching from the first audio stream to the second audio stream at an endpoint playing the audio streams to the
15 call on hold.

9. The method of Claim 1, further comprising presenting to users for selection only audio streams with a quality value above a threshold.
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10. The method of Claim 1, wherein determining the quality value for each of the plurality of audio streams comprises:

receiving the plurality of audio streams; and
25 monitoring each of the quality streams based on at least one of packet jitter and packet loss of the audio stream.

11. The method of Claim 1, further comprising
30 communicating at least an identifier of the audio stream

selected for playing to the call on hold to an endpoint handling the call on hold.

12. The method of Claim 1, wherein determining the
5 quality value for each of the plurality of audio streams comprises receiving the quality values for the audio streams from an upstream device in an Internet Protocol network.

10 13. The method of Claim 12, wherein the upstream device comprises an edge router of the Internet Protocol network.

14. The method of Claim 1, further comprising
15 selecting a locally stored audio file for playing to the call on hold in response to at least the quality values for the audio streams being below a threshold value.

15. The method of Claim 1, further comprising
20 receiving a list of audio streams, the plurality of audio streams including at least one of the audio streams identified by the list.

16. The method of Claim 15, wherein the list is
25 generated by a call manager.

17. The method of Claim 1, further comprising
generating a list of locally used audio streams, the plurality of audio streams including at least one of the
30 locally used audio streams.

18. The method of Claim 1, further comprising:
identifying a poor quality audio stream based on the
quality value for the audio stream; and
communicating an identifier of the poor quality
5 stream to an upstream router for discard of the poor
quality audio stream.

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19. A system for providing an audio stream in a voice over Internet Protocol (VoIP) environment, comprising:

5 means for determining a quality value for each of a plurality of audio streams communicated in a VoIP format; and

10 means for selecting one of the audio streams for playing to a call on hold based on the quality values for the audio streams.

20. The system of Claim 19, wherein the audio stream comprises a music-on-hold channel from a music-on-hold server.

15 21. The system of Claim 19, wherein the quality value for an audio stream comprises at least one of packet jitter and packet loss for the audio stream.

20 22. The system of Claim 19, further comprising means for selecting the audio stream comprising a highest quality value.

25 23. The system of Claim 19, wherein the quality value for an audio stream comprises a current value for the audio stream determined based on real-time performance of the audio stream at a point at least proximate to a device playing the selected audio stream to the call on hold.

30 24. The system of Claim 19, wherein the audio stream selected for playing to the call on hold comprises

a first audio stream, further comprising means for, in response to at least degradation of the first audio stream below a threshold, selecting for playing to the call on hold a second audio stream based on a then
5 current quality value for each of the remaining the audio streams.

25. The system of Claim 19, further comprising means for determining the quality value for each audio
10 stream based on a sliding window of quality metrics for the audio stream.

26. The system of Claim 24, further comprising means for switching from the first audio stream to the
15 second audio stream at an endpoint playing the audio streams to the call on hold.

27. The system of Claim 19, further comprising means for presenting to users for selection only audio
20 streams with a quality value above a threshold.

28. The system of Claim 19, wherein the means for determining the quality value for each of the plurality of audio streams comprises:

25 means for receiving the plurality of audio streams;
and

means for monitoring each of the quality streams based on at least one of packet jitter and packet loss of the audio stream.

29. The system of Claim 19, further comprising means for communicating at least an identifier of the audio stream selected for playing to the call on hold to an endpoint handling the call on hold.

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30. The system of Claim 19, wherein the means for determining the quality value for each of the plurality of audio streams comprises means for receiving the quality values for the audio streams from an upstream device in an Internet Protocol network.

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31. The system of Claim 30, wherein the upstream device comprises an edge router of the Internet Protocol network.

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32. The system of Claim 19, further comprising means for selecting a locally stored audio file for playing to the call on hold in response to at least the quality values for the audio streams being below a threshold value.

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33. The system of Claim 19, further comprising means for receiving a list of audio streams, the plurality of audio streams including at least one of the audio streams identified by the list.

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34. The system of Claim 33, wherein the list is generated by a call manager.

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35. The system of Claim 19, further comprising means for generating a list of locally used audio

streams, the plurality of audio streams including at least one of the locally used audio streams.

36. The system of Claim 19, further comprising:

5 means for identifying a poor quality audio stream based on the quality value for the audio stream; and

means for communicating an identifier of the poor quality stream to an upstream router for discard of the poor quality audio stream.

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37. A system for providing an audio stream in a voice over Internet Protocol (VoIP) environment, the system comprising logic encoded in media and operable to:

5 determine a quality value for each of a plurality of audio streams communicated in a VoIP format; and

select one of the audio streams for playing to a call on hold based on the quality values for the audio streams.

10 38. The system of Claim 37, wherein the audio stream comprises a music-on-hold channel from a music-on-hold server.

15 39. The system of Claim 37, wherein the quality value for an audio stream comprises at least one of packet jitter and packet loss for the audio stream.

20 40. The system of Claim 37, the logic further operable to select the audio stream comprising a highest quality value.

25 41. The system of Claim 37, wherein the quality value for an audio stream comprises a current value for the audio stream determined based on real-time performance of the audio stream at a point at least proximate to a device playing the selected audio stream to the call on hold.

30 42. The system of Claim 37, wherein the audio stream selected for playing to the call on hold comprises a first audio stream, the logic further operable, in

response to at least degradation of the first audio stream below a threshold, to select for playing to the call on hold a second audio stream based on a then current quality value for each of the remaining the audio streams.

43. The system of Claim 37, the logic operable to determine the quality value for each audio stream based on a sliding window of quality metrics for the audio stream.

44. The system of Claim 42, the logic further operable to switch from the first audio stream to the second audio stream at an endpoint playing the audio streams to the call on hold.

45. The system of Claim 37, the logic further operable to present to users for selection only audio streams with a quality value above a threshold.

46. The system of Claim 37, the logic operable to determine the quality value for each of the plurality of audio streams by:

receiving the plurality of audio streams; and
monitoring each of the quality streams based on at least one of packet jitter and packet loss of the audio stream.

47. The system of Claim 37, the logic further operable to communicate at least an identifier of the audio stream selected for playing to the call on hold to an endpoint handling the call on hold.

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48. The system of Claim 37, to the logic operable to determine the quality value for each of the plurality of audio streams by receiving the quality values for the audio streams from an upstream device in an Internet Protocol network.

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49. The system of Claim 48, wherein the upstream device comprises an edge router of the Internet Protocol network.

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50. The system of Claim 37, the logic further operable to select a locally stored audio file for playing to the call on hold in response to at least the quality values for the audio streams being below a threshold value.

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51. The system of Claim 37, the logic further operable to receive a list of audio streams, the plurality of audio streams including at least one of the audio streams identified by the list.

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52. The system of Claim 51, wherein the list is generated by a call manager.

53. The system of Claim 37, the logic further operable to generate a list of locally used audio streams, the plurality of audio streams including at least one of the locally used audio streams.

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54. The system of Claim 37, the logic further operable to:

identify a poor quality audio stream based on the quality value for the audio stream; and

10 communicate an identifier of the poor quality stream to an upstream router for discard of the poor quality audio stream.

55. A method for providing music-on-hold at an endpoint of an Internet Protocol network, comprising:

receiving a plurality of music-on-hold streams;

repetitively determining a real-time quality value

5 for each of the audio streams based on at least one of
packet jitter and packet loss for the music-on-hold
stream;

in response to at least a call being placed on hold,
selecting one of the music-on-hold streams as a high
10 quality stream based on the real-time quality values for
the music-on-hold streams; and

playing the high quality stream to the call on hold.

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